

### **REMARKS**

Claims 20 and 22-53 are currently pending. By this Amendment, claims 35, 41, and 51 have been cancelled, and claims 54-56 have been added. Accordingly, claims 20, 22-34, 36-40, and 42-50, and 52-56 are currently at issue.

#### **I. Double Patenting**

In the Office Action, claims 20 and 22-53 were provisionally rejected for obviousness-type double patenting over the claims of Application No. 10/017,126. Applicant submits that Application No. 10/017,126 is not a copending application, and is issued as U.S. Patent No. 7,115,298. Applicant has already submitted a terminal disclaimer relative to USPN 7,115,298, and thus, Applicant respectfully requests the Examiner's provisional rejection be withdrawn.

#### **II. Rejections Under 35 U.S.C. § 112**

In paragraph 5 of the Office Action, claims 35-37 and 39-41 were rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement. More specifically, the Examiner states that the weight gain and adjusted feed conversion rates of the claims are not supported by the specification. Applicant has cancelled claims 35 and 41. Claims 36 and 39 now recite, "the poultry feed diet composition provides sufficient nutrition to provide the adjusted feed conversion rate of about 1.284 or 1.292 for the poultry breeders." This element is supported at Par. 71 of the specification, where Compositions 3 and 4 were shown to provide such feed conversion rates. Additionally, the element, "an adjusted feed conversion rate of less than about 1.309," as recited in claims 37 and 40, is supported by Par. 71 of the specification, where it is documented that Composition 1 produced a feed conversion rate of 1.309, and Compositions 3 and 4 provided conversion rates less than 1.309. Accordingly, Applicant respectfully requests withdrawal of the Examiner's rejections on this ground.

Additionally, in paragraph 7 of the Office Action, claims 29, 49, 35-37, and 39-41 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Applicant submits that the amendments to claims 35-37 and 39-41, discussed above, have addressed these rejections as

well. Accordingly, Applicant respectfully requests withdrawal of the Examiner's rejections on this ground.

Regarding claim 49, Applicant assumes that the Examiner intended to refer to claim 50, which is similar in language to claim 20. To address the Examiner's rejections, Applicant has amended claims 29 and 50 to recite, "each of said byproduct components being in a state as natively present in dried citrus byproduct produced from juice extraction equipment." Applicant submits that the meaning of this phrase is now clarified – that the supplement includes byproduct components that are in the same state as they would natively be in dried citrus byproduct resulting from processing with juice extraction equipment. Accordingly, Applicant respectfully requests withdrawal of the Examiner's rejections on this ground.

### **III. Rejections Under 35 U.S.C. § 102**

In paragraph 9 of the Office Action, claims 20, 27, 38, and 44 were rejected under 35 U.S.C. § 102(b) as being anticipated by "Feeding Value of Dried Citrus Peel in Broiler Diets by S.L. Kang and J.H. Choi ("Kang"). Applicant respectfully traverses these rejections in light of the amendments herein.

Claim 20, as amended, includes among other elements, "the poultry feed diet composition provides sufficient nutrition for the poultry breeders to achieve an average adjusted feed conversion rate that is lower than an adjusted feed conversion rate for similar poultry breeders feeding on the nutritive balanced feed composition without the citrus feed supplement." Kang does not disclose that the composition provides improved feed conversion rates for poultry breeders. In fact, Kang teaches exactly the opposite: "As the level of citrus peel in diets increased, more feed was required per unit weight gained." This is not surprising in view of Applicant's specification, as Kang teaches the addition of greater amounts of citrus byproduct than was found to be effective by Applicant. Accordingly, Kang does not disclose, teach, or suggest all the features of claim 20, and cannot anticipate claim 20.

Claim 38, as amended, includes among other elements, "said citrus feed supplement comprising ... a combination of byproduct components ... comprising at least one component selected from the group consisting of: (a) pectin, demethylated pectin, and combinations thereof; (b) a food grade citrus-originating acid; (c) hesperidin, other flavonoids, and combinations

thereof; (d) one or more limonin glucosides other bioflavonoids and combinations thereof; (e) sinensetin, tangeretin, nobiletin, other polymethoxylated flavones, and combinations thereof; and (f) any combination of components (a)-(e)." Kang does not disclose that the citrus peel contains the addition of any of these byproduct components. Accordingly, Kang does not disclose, teach, or suggest this feature of claim 20, and cannot anticipate claim 20.

Claims 27 and 44 depend from claims 20 and 38, respectively, and contain all the elements thereof. Thus, for the reasons stated above with respect to claims 20 and 38, Kang does not anticipate claims 27 and 44.

#### **IV. Rejections Under 35 U.S.C. § 103**

##### **A. Rejections Over Kang**

In paragraph 11 of the Office Action, claims 22-24, 28, 34-37, 39-42, 45, 46, and 49 were rejected under 35 U.S.C. § 103(a) as being obvious over Kang. Applicant respectfully traverses these rejections in light of the amendments to claims 20 and 38 herein.

Claims 22-24, 28, and 34-37 depend from claim 20 and include, among other elements, "the poultry feed diet composition provides sufficient nutrition for the poultry breeders to achieve an average adjusted feed conversion rate that is lower than an adjusted feed conversion rate for similar poultry breeders feeding on the nutritive balanced feed composition without the citrus feed supplement." As stated above, Kang does not disclose that the composition provides improved feed conversion rates for poultry breeders, and in fact, teaches that the citrus peel produces increased (i.e. inferior) feed conversion rates. As noted in Par. 71 of Applicant's specification, lower concentrations of citrus byproduct, such as 0.8% to 1.6%, were found to produce increased feed conversion rates, while the higher amounts used by Kang produced inferior results in feed conversion rates. Accordingly, Kang teaches away from modification of the formulation to achieve improved feed conversion rates, because one skilled in the art, upon reading Kang, would be led to believe that citrus peel additions produce inferior feed conversion rates. As a result, Applicant submits that experimentation to discover optimal ranges for compositions and feed conversion rates would not be obvious, since Kang unequivocally teaches away from such experimentation. Additionally, Applicant has shown criticality to the recited

range of feed compositions, as the recited compositions produce superior feed conversion rates. Thus, no prima facie case of obviousness can be established with respect to claims 22-24, 28, and 34-37.

Claims 39-42, 45, 46, and 49 depend from claim 38 and include, among other elements, "said citrus feed supplement comprising ... a combination of byproduct components ... comprising at least one component selected from the group consisting of: (a) pectin, demethylated pectin, and combinations thereof; (b) a food grade citrus-originating acid; (c) hesperidin, other flavonoids, and combinations thereof; (d) one or more limonin glucosides other bioflavonoids and combinations thereof; (e) sinensetin, tangeretin, nobiletin, other polymethoxylated flavones, and combinations thereof; and (f) any combination of components (a)-(e)." As stated above, Kang does not disclose this feature of claim 38, and there is no reason one skilled in the art would modify Kang to include this feature. Accordingly, no prima facie case of obviousness can be established with respect to claims 39-42, 45, 46, and 49.

#### **B. Rejections Over Kang in View of Miller**

In paragraph 12 of the Office Action, claims 25, 26, 47, and 48 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kang in view of U.S. Patent No. 6,783,777 to Miller et al. ("Miller"). Applicant respectfully traverses these rejections in light of the amendments to claims 20 and 38 herein.

Claims 25 and 26 depend from claim 20 and include, among other elements, "the poultry feed diet composition provides sufficient nutrition for the poultry breeders to achieve an average adjusted feed conversion rate that is lower than an adjusted feed conversion rate for similar poultry breeders feeding on the nutritive balanced feed composition without the citrus feed supplement." As stated above, Kang does not disclose this feature. Additionally, Miller does not disclose this claimed feature, and the Office Action points to no disclosure in Miller of providing increased feed conversion rates using a citrus feed supplement. Accordingly, no prima facie case of obviousness can be established with respect to claims 25 and 26.

Claims 47 and 48 depend from claim 38 and include, among other elements, "said citrus feed supplement comprising ... a combination of byproduct components ... comprising at least one component selected from the group consisting of: (a) pectin, demethylated pectin, and

combinations thereof; (b) a food grade citrus-originating acid; (c) hesperidin, other flavonoids, and combinations thereof; (d) one or more limonin glucosides other bioflavonoids and combinations thereof; (e) sinensetin, tangeretin, nobiletin, other polymethoxylated flavones, and combinations thereof; and (f) any combination of components (a)-(e)." As stated above, Kang does not disclose this feature of claim 38. Additionally, Miller does not disclose this feature, and the Office Action does not point to any such disclosure in Miller. Accordingly, no prima facie case of obviousness can be established with respect to claims 47 and 48.

**C. Rejections Over Kang in View of Deyoe**

In paragraph 13 of the Office Action, claims 29, 30, 50, and 51 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kang in view of "Citrus Bioflavonoids in Broiler Diets" ("Deyoe"). Applicant respectfully traverses these rejections in light of the amendments to claims 20 and 38 herein.

Claims 29 and 30 depend from claim 20 and include, among other elements, "the poultry feed diet composition provides sufficient nutrition for the poultry breeders to achieve an average adjusted feed conversion rate that is lower than an adjusted feed conversion rate for similar poultry breeders feeding on the nutritive balanced feed composition without the citrus feed supplement." As stated above, Kang does not disclose this feature. Additionally, Deyoe does not disclose this claimed feature, and the Office Action points to no disclosure in Deyoe of providing increased feed conversion rates using a citrus byproduct supplement. Accordingly, no prima facie case of obviousness can be established with respect to claims 29 and 30.

Claims 50 and 51 depend from claim 38 and include, among other elements, "said citrus feed supplement comprising ... a combination of byproduct components ... comprising at least one component selected from the group consisting of: (a) pectin, demethylated pectin, and combinations thereof; (b) a food grade citrus-originating acid; (c) hesperidin, other flavonoids, and combinations thereof; (d) one or more limonin glucosides other bioflavonoids and combinations thereof; (e) sinensetin, tangeretin, nobiletin, other polymethoxylated flavones, and combinations thereof; and (f) any combination of components (a)-(e)." As stated above, Kang does not disclose this feature of claim 38. The Examiner asserts that Deyoe discloses this feature. However, one skilled in the art would not choose to modify the feed composition

disclosed by Kang to include the a supplement as disclosed by Deyoe in order to improve feed conversion rates. This is because Deyoe discloses that feed conversion rates are either unaffected or even decreased through the use of the disclosed supplements. (See Deyoe, P. 1089-90). In fact, Deyoe even speculates that the supplements may have a toxic effect on the birds (at 1089, Col. 2). Thus, Deyoe is not properly combinable with Kang to form an obviousness rejection of the present claims, and accordingly, no prima facie case of obviousness can be established with respect to claims 50 and 51.

**D. Rejections Over Kang in View of AAPA**

In paragraph 14 of the Office Action, claims 31 and 43 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kang in view of Applicant's allegedly admitted prior art ("AAPA"). Applicant respectfully traverses these rejections in light of the amendments to claims 20 and 38 herein.

Claim 31 depends from claim 20 and includes, among other elements, "the poultry feed diet composition provides sufficient nutrition for the poultry breeders to achieve an average adjusted feed conversion rate that is lower than an adjusted feed conversion rate for similar poultry breeders feeding on the nutritive balanced feed composition without the citrus feed supplement." As stated above, Kang does not disclose this feature. Additionally, Applicant has admitted no prior art that discloses this element. Accordingly, no prima facie case of obviousness can be established with respect to claim 31.

Claim 43 depends from claim 38 and includes, among other elements, "said citrus feed supplement comprising ... a combination of byproduct components ... comprising at least one component selected from the group consisting of: (a) pectin, demethylated pectin, and combinations thereof; (b) a food grade citrus-originating acid; (c) hesperidin, other flavonoids, and combinations thereof; (d) one or more limonin glucosides other bioflavonoids and combinations thereof; (e) sinensetin, tangeretin, nobiletin, other polymethoxylated flavones, and combinations thereof; and (f) any combination of components (a)-(e)." As stated above, Kang does not disclose this feature of claim 38. Additionally, Applicant has admitted no prior art that discloses this element. Accordingly, no prima facie case of obviousness can be established with respect to claim 43.

**E. Rejections Over Kang in View of Winstrom**

In paragraph 15 of the Office Action, claims 32, 33, 52, and 53 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kang in view of U.S. Patent No. 6,761,899 to Winstrom et al. ("Winstrom"). Applicant respectfully traverses these rejections in light of the amendments to claims 20 and 38 herein.

Claims 32 and 33 depend from claim 20 and include, among other elements, "the poultry feed diet composition provides sufficient nutrition for the poultry breeders to achieve an average adjusted feed conversion rate that is lower than an adjusted feed conversion rate for similar poultry breeders feeding on the nutritive balanced feed composition without the citrus feed supplement." As stated above, Kang does not disclose this feature. Additionally, Winstrom does not disclose this claimed feature, and the Office Action points to no disclosure in Winstrom of providing increased feed conversion rates using a citrus feed supplement. Accordingly, no prima facie case of obviousness can be established with respect to claims 32 and 33.

Claims 52 and 53 depend from claim 38 and include, among other elements, "said citrus feed supplement comprising ... a combination of byproduct components ... comprising at least one component selected from the group consisting of: (a) pectin, demethylated pectin, and combinations thereof; (b) a food grade citrus-originating acid; (c) hesperidin, other flavonoids, and combinations thereof; (d) one or more limonin glucosides other bioflavonoids and combinations thereof; (e) sinensetin, tangeretin, nobiletin, other polymethoxylated flavones, and combinations thereof; and (f) any combination of components (a)-(e)." As stated above, Kang does not disclose this feature of claim 38. Additionally, Winstrom does not disclose this feature, and the Office Action does not point to any such disclosure in Winstrom. Accordingly, no prima facie case of obviousness can be established with respect to claims 52 and 53.

**V. New Claims**

New claims 54-56 have been added to the present Application. Applicant submits that That new claims 54-56 are patentable over the cited references, for the reasons briefly summarized below. New claims 54-56 depend from claims 20 and 38, respectively, and contain all the elements thereof. Accordingly, claims 54-56 are patentable for the reasons stated above with respect to claims 20 and 38.

Applicant submits that new claims 54-56 are supported by the present specification, at Par. 71. Composition 1 (control) was found to provide an adjusted feed conversion rate of 1.309, and Composition 3 was found to provide a superior adjusted feed conversion rate of 1.284. The difference between these adjusted feed conversion rates is about 2%, as recited in claims 54 and 55.



**CONCLUSION**

In view of the foregoing, Applicant respectfully requests reconsideration of the Examiner's rejections and allowance of claims 20, 22-34, 36-40, and 42-50, and 52-53 in the present Application. Applicant further requests examination and allowance of new claims 54-56 in the present Application. Applicant submits that the Application is in condition for allowance and respectfully requests an early notice of the same.

Please charge all fees in connection with this communication to Deposit Account No. 19-0733.

Respectfully submitted,

Dated: May 29, 2008

By: \_\_\_\_\_



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